

## **Delta Operations for Salmonids and Sturgeon (DOSS) Group**

**Conference call: 2/28/12 at 9:00 a.m.**

**Objective:** Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: <http://www.swr.noaa.gov/ocap/doss.htm>

**DWR:** Mike Ford, Kevin Reece, Andy Chu, James Gleim, Angela Llaban, Edmund Yu

**FWS:** Leigh Bartoo, Craig Anderson, Roger Guinee

**NMFS:** Barbara Rocco, Bruce Oppenheim, Barb Byrne, Jeff Stuart, Garwin Yip

**Reclamation:** Josh Israel, Thuy Washburn

**DFG:** Bob Fujimura, Jason Roberts, Chad Dibble

**EPA, SWRCB, USGS:** not present

### **Agenda**

1. Fish monitoring
2. Current operations
3. OMR tech memo status

### **Action Item [11/15/11]**

Evaluate the data from Mill and Deer Creek RSTs, Tisdale, and Knights Landing RSTs and compare the timing of spring-run Chinook salmon migration captured by each data set. **Data not available until 6/12/12 per Mike Berry (DFG).**

**Action Item [1/3/12]:** Review the DOSS section of the annual review report and provide responses regarding implementation of recommendations. **\*See discussion below.**

**\* Oppenheim (NMFS), Llaban (DWR), and Israel (Reclamation) will meet again to form a response to the science panel. They had one previous meeting and decided to wait until after the workshops to meet again. Oppenheim will provide information for the next meeting. Yip (NMFS) suggested that Donna Garcia be asked whether anything has been drafted as a response, particularly on DOSS.**

**Action Item [1/17/12]:** DWR, Reclamation, NMFS, and DFG will meet to discuss how best to include CWT information in available salvage databases, both going forward and perhaps retrospectively. Bob Fujimura, DFG, agreed to lead this effort and provide a list of what needs to be revised. **Bob reported no action.**

**Action Item [1/31/12]:** Reclamation (Israel) will contact Stockton FWS (Kim Webb) to discuss centralization of CWT data. **\*\*See discussion below. Delete.**

**\*\*Israel has looked the information that Spiegel (FWS) put together and believes that there's been a consolidation of data, in particular about when releases are happening. Llaban (DWR) is coordinating this effort. Israel asked whether he still needed to follow up**

on this action; however, Oppenheim had already contacted Kim Webb so there was no need to follow up.

**Action Item [1/31/12]:** Llaban will work on getting the coded wire tag data from the SWP on a more timely basis, but it might take some time to consolidate the two data sets that are collected by different groups. This would require modifying the SWP data sheets to include daily CWT reporting. **No action.**

**Fish Monitoring:** The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. See:

<http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm>.

Location	Chippis Is. Midwater Trawl	Sacramento Kodiak Trawl	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST
Sample Date	2/21, 24	2/21, 22, 24	2/22-24	2/21-2/23	2/21-24	2/22, 24, 27
Total Catch	26	24	0	704	36	24
FR		4		685	35	23
WR				3		
SR				15		1
LFR						
Ad-Clipped Chinook						
DS	10					
Splittail	3			1		
Longfin	10 (64-117 mm with expression & 3 eggs)					
SH (ad-clip)	3	11			1	
SH (wild)		9				
W. Temp. (avg. °F)	52.9	52.2	55.8	53.1	53.0	51.0
Flows (avg. cfs)					6139	6200
Turbidity (avg. NTU)					13.4	10.5
WR/LFR Avg. CPUE						
FR/SR Avg. CPUE					0.13	0.08

**Key:** FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail, CPUE = catch per unit of effort, ACT = acoustical tag

**Fish Salvage Data (2/21–2/26):** Reports are also posted at <ftp://ftp.delta.dfg.ca.gov/salvage>: and you can locate the table under folder “DOSS salvage tables” (you can also try <http://www.dfg.ca.gov/delta/apps/salvage/Default.aspx>) and click on “salvage FTP site.

Chinook salmon<sup>1</sup>: Fifteen ad-clipped Chinook salmon were salvaged at the SWP for a loss of 67; none were salvaged at the CVP. Twenty-four non-clipped Chinook were salvaged at the SWP for a loss of 108; none were salvaged at the CVP. The cumulative year-to-date total loss for winter-run Chinook is 50 at the CVP and 152 at the SWP. The water-year (10/1/2011 to present) salvage totals of all races of Chinook salmon at the CVP are 194 ad-clipped (loss = 146) and 68 non-clipped (loss = 50). The water-year salvage totals of all races of Chinook salmon at the SWP are 154 ad-clipped (loss = 689) and 34 non-clipped (loss = 152).

**NOTE:** The older juvenile loss density trigger was exceeded on 2/23/12 and 2/24/12: 9.5 and 18.0 fish/TAF, respectively. NMFS received notification of the second trigger being exceeded on 2/23 and Garwin Yip notified WOMT on 2/24 that the second trigger of 5.0 fish/TAF had been exceeded, which requires OMR at no more negative than -2,500 cfs for a minimum of 5 days. The 5-day compliance period began on 2/24 and continues through today, 2/28/12.

Llaban (DWR) reported that there were salvages of older juveniles at SWP but none at CVP. Using the loss multiplier, the preliminary density for 2/27 = 3.2 fish/TAF but this will need to be verified by DFG. We’re currently tracking between the two triggers and it depends on what comes in today.

Steelhead: Twenty-three ad-clipped steelhead were salvaged at the CVP and 5 at the SWP. Four non-clipped steelhead were salvaged at the SWP; none were salvaged at the CVP. The loss density was 4.2 fish/TAF. The water-year salvage totals of steelhead at the CVP are 72 ad-clipped and 2 non-clipped. The water-year salvage totals of steelhead at the SWP are 37 ad-clipped and 16 non-clipped.

Delta smelt: Delta smelt were salvaged at the CVP (weekly expanded salvage = 12) and SWP (weekly expanded salvage = 20). The water-year salvage total of delta smelt at the CVP is 78. The water-year salvage total of delta smelt at the SWP is 20. No larval delta smelt <20 mm FL were reported in larval fish samples through 2/26/2012 at the CVP and through 0900 hours on 2/23/2012 at the SWP.

Longfin smelt: No longfin smelt ( $\geq 20$  mm) has been salvaged at either facility. No Post-larval and pre-juvenile longfin smelt were found in larval fish samples at the CVP from 2/20/2012 to 2/26/2012 and at the SWP from 1500 hours on 2/17/2012 to 0900 hours on 2/23/2012.

Splittail: No splittail were salvaged at either facility. The water-year salvage total of splittail at the CVP is 211. The water-year salvage total of splittail at the SWP is 3,794.

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<sup>1</sup> Race of clipped salmon is determined solely by length of the fish at date criteria on date of salvage and should be treated as preliminary and may be subject to change when Reclamation and FWS reports the tag information on race.

White sturgeon: No white sturgeon were salvaged at either facility. The water-year salvage total of white sturgeon at the CVP is 64. No white sturgeon have been salvaged at the SWP this water year.

Green sturgeon: No green sturgeon have been salvaged at either facility this water year.

**Coded Wire Tagged (CWT) salvage and loss (see table below):** Most CWT fish are coming from the Coleman Fish Hatchery (see table). No hatchery winter-run Chinook were collected at the facilities. Because of the equipment failure when releasing the last group of spring-run surrogates (1/20/12), the total number is an estimate, although the hatchery will provide a more accurate number later. DOSS is not formally tracking this surrogate release because we don't know the exact number that made it into the river; however, they are being salvaged and those numbers are being reported—the data is still helpful to look at.

Because the total number of fish that were released in the last spring-run release group (1/20/12) is not known, there was a question about whether any fish salvaged from that group would trigger an OMR action. DOSS had previously decided to only track this release (see notes from

**Coleman Hatchery Late-Fall Run and Livingston Stone Winter-Run Chinook Loss at the Delta Fish Facilities, 2011/2012**

Release Date	CWT Race	Release Site	Release Type	Confirmed Loss	Number Released	Total Entering Delta	% Loss <sup>1</sup>	First Concern Level	Second Concern Level	Date of First Loss	Date of Last Loss
12/16/2011	LF	Battle Creek	Production	100.96	394,700	n/a	0.026	n/a	n/a	1/11/2012	2/21/2012
12/23/2011	LF	Battle Creek	Spring Surrogate	2.92	62,400	n/a	0.005	0.5%	1.0%	1/18/2012	1/31/2012
1/3/2012	LF	Battle Creek	Production	482.60	448,600	n/a	0.108	n/a	n/a	1/19/2012	2/26/2012
1/13/2012	LF	Battle Creek	Spring Surrogate	52.17	80,800	n/a	0.065	0.5%	1.0%	1/31/2012	2/18/2012
1/20/2012	LF	Battle Creek	Spring Surrogate	80.26	20,000	n/a	0.401	n/a	n/a	1/30/2012	2/21/2012
2/9/2012	W	Redding	Production	0.00	194,000	96,525	0.000	0.5%	1.0%	-	-

**For Chinook lost 10/1/2011 through 2/26/2012**

**SWP coded-wire tags read 10/1/2011 through 2/26/2012**

**CVP coded-wire tags read 10/1/2011 through 2/26/2012**

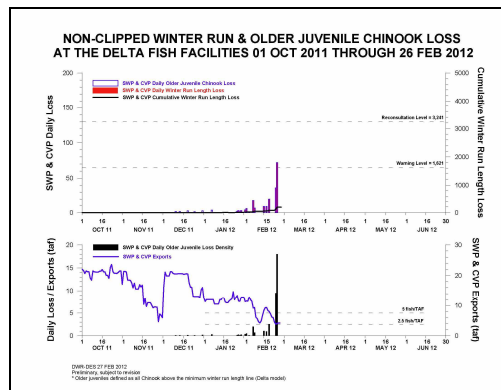
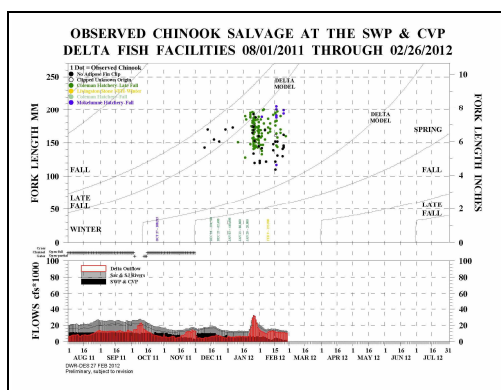
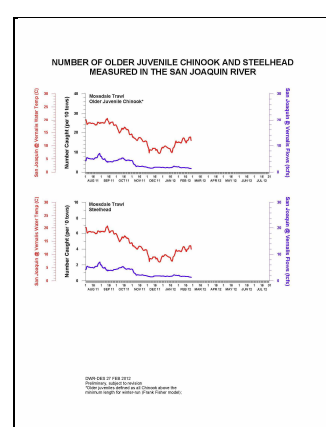
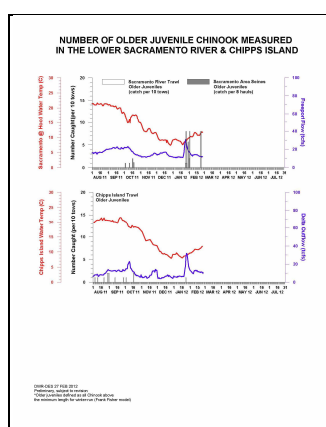
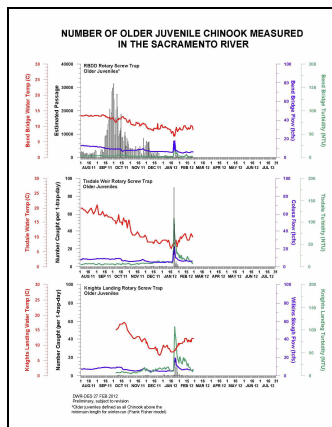
<sup>1</sup>LF % Loss = (Confirmed Loss/Number Released)\*100; W % Loss = (Confirmed Loss/Total Entering Delta)\*100

DWR-DES Revised 2/27/2012

Preliminary, subject to revision

1/24/12 conference call). It was noted that if the third surrogate release hits a loss of 0.5, it would not trigger an OMR action to reduce flows because the exact number released is not known and the calculation is based on an estimated number released. Llaban reported that the variability between CWT releases in terms of loss last year was below 0.5 percent.

Below are the weekly graphs prepared by DWR (Llaban) for the capture of older juvenile salmon in the Sacramento River and Chippis Island trawls from October 2011 through February 27, 2012.



## Operations (2/28/12)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	1,500	Jones Pumping Plant	1,600
Reservoir Releases (cfs)			
Feather - Oroville	1,850 (ramping down to 1,750 on 2/29/12 to conserve storage upstream)	American - Nimbus	1,450 (down to 800 by March)
		Sacramento - Keswick	4,600 (need to ensure that Wilkins Slough stays at approx. 5,000. Will stay at 4,500 for now)
		Stanislaus - Goodwin	300
Reservoir Storage (in TAF, % of capacity)			
San Luis (SWP)	974	San Luis (CVP)	766
Oroville	2,512	Shasta	3,162
New Melones	1,964	Folsom	389
Delta Operations			
DCC	Closed as of	Sacramento River at	11,470

	12/1/11	Freeport (cfs)	
Outflow Index (cfs)	9,200	San Joaquin River (cfs) at Vernalis	1,333
Total Delta Inflow (cfs)	13,343	OMR (daily) (CDEC) (cfs)	
Water Temperature (°F)		OMR 5 day (CDEC) (cfs)	-1,753
X2 (km)	73	OMR 14 day (CDEC) (cfs)	-2384
E/I (%)	~21.5 (3-d avg.)		

The question was raised about Shasta releases being at the minimum 3,250 cfs and compliance with RPA Action I.2.3 and the status the March 1 contingency plan by Reclamation with a Keswick release schedule to meet end-of-September (EOS) storage level requirements. Washburn (Reclamation) did not know the status but mentioned that Reclamation was drafting a response to the letter NMFS sent on 2/22/12. There is apparently some disagreement on how the Shasta RPA action was interpreted. It was noted that even if the drought exception RPA Action I.2.3c is not implemented, RPA I.2.3b requires combined export pumping to be at 2,000 cfs while maintaining Keswick releases at 3,250 cfs.

DWR was told that between Reclamation and NMFS, other options such as increasing Trinity and Folsom releases would be considered before going to Oroville. Non-compliance to minimum Keswick releases at 3,250 cfs and curtailing DWR exports will need to be discussed among the agencies. Reclamation stated they had to increase Keswick releases when Glenn-Colusa Irrigation District (GCID) began pumping. GCID is a settlement contractor, so its water supply allocation was reduced to only 75% this year. Reclamation has no discretion in meeting its demand if GCID begins pumping. The Feather River release is currently 2,000 and will continue to drop down to 1,750 cfs until 2/29/12.

**X2:** Accrued 22 days as of 2/27/12 for February X2 requirements at Chipps Island. DWR might not need any more X2 days for March at Chipps Island because it has already fulfilled the X2 days met by water quality criteria. With reductions from releases and exports, the OMR index calculated based on Vernalis forecast used for -3,500 cfs shows that Vernalis D-1642 and OMR -3,500 are controlling the projects if the weather remains dry. With rain coming in today and through 3/1/12, it might increase the runoff in the system; therefore, for the next 5 days, the cost for export impacts on the projects from OMR of -3,500 cfs, flows can increase slightly. It is expected that the coming storm event may produce 0.3 inch of precipitation over the next 3 days. The additional outflow from the 0.3 inch of precipitation would be ~1,700 cfs.

**Delta Conditions:** Balanced.

**OMR Technical Memo:** Byrne (NMFS) will provide the DOSS members with the updates and reports from the planning committee meeting.

**Smelt Working Group (SWG) update:** There were no recommendations for changes in current operations. The NMFS BiOp is controlling and protecting both delta and longfin smelt. There were 120 delta smelt salvaged between CVP and SWP from January 17 through February 27. Longfin smelt larvae were collected at both facilities. Both delta smelt and longfin smelt larvae were collected at the Contra Costa Water District Old River fish screen. For additional notes on the SWG, see the FWS website.

**DOSS Advice to WOMT and NMFS:** The DOSS advice for today is for the projects to continue managing OMR flows to no more negative than -3,500 cfs until March 3, pursuant to NMFS RPA Action IV.2.3. If today's (2/28) older juvenile loss density comes in >5.0 fish/TAF, operate to the more restrictive -2,500 cfs OMR criteria until March 4. Currently, the 14-day average OMR flow is -2,278 cfs; therefore, no change in operations is required.

**Next Meeting:** The next DOSS conference call will be on 3/6/12 at 9:00 a.m.